

Counting Critters



Kyle Wolter
Mathematics
Eleanor Roosevelt Middle School
Dubuque County Conservation Board

Part I: Overview of Business

Dubuque County Conservation Board, The Swiss Valley Nature Preserve consists of 400 acres of hardwood forest along with 10 miles of marked trails. The Swiss Valley nature preserve offers field trips year round that include trout fishing, hiking, biking and year-round activities. Whatever the season, whatever your interest, you will find that our recreation areas really do offer “Something for Everyone.”

Part II: Job Specifics

- The Dubuque County Conservation Board is in charge of collecting data on various animal and plant species in the nature preserve. The well-being of the plants and animals in the preserve and park are just one of the major responsibilities of the rangers and naturalists.
- The naturalists follow safe trapping protocol to collect data on population density.

Part III: Introduce the Problem

How can the population density data be collected extrapolated over long periods of time to make environmental and business decisions.

Part IV: Background

- Students need to understand that statistics can be used to gain information about a population by examining a sample of a population. Students will also need to use data to draw inferences about species populations.
- Sufficient data collection processes for a variety of different species. Data also needed to be collected and analyzed over a long period of time and presented to the board for consideration.

Part V: Business Solution

Used a variety of data collection tools such as safe traps, snake boards, goose banding and electrofishing boats. Data is then inserted into a Excel document and kept over a long period of time. The data is then presented to the board if needed to make conservation and financial decisions.

Part VI: Student Solutions

The purpose of this project is to develop a framework for data collection and presentation of data as evidence for decision making.